

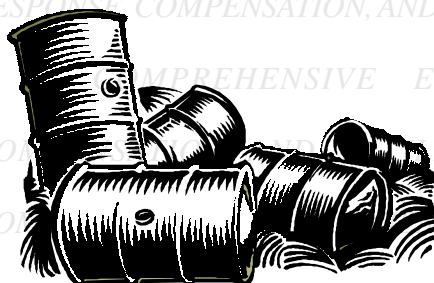


Center for
Environmental
Information and
Statistics

US Environmental
Protection Agency

Major Findings from the CEIS Review of EPA'S

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY INFORMATION SYSTEM (CERCLIS) DATABASE



July 13, 1999

Major Findings from the CEIS Review of EPA's CERCLIS Database

1. INTRODUCTION	1
2. SUMMARY ANSWERS TO REVIEW QUESTIONS	2
3. DETAILED ANSWERS TO REVIEW QUESTIONS	4
3.1. What does the database cover?	4
3.2. Can the database be used for spatial analysis?	6
3.3. Can the database be used for temporal analysis?	6
3.4. How consistent are the variables over space and time?	6
3.5. Can data from CERCLIS be linked with information from other databases?	6
3.6. How accurate are the data in CERCLIS?	7
3.7. What are the limitations of CERCLIS?	7
3.8. How can I get information on CERCLIS?	7
3.9. Is there documentation on CERCLIS?	8

1. INTRODUCTION

The Superfund Program was created as a result of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. CERCLA was enacted in December, 1980, and amended by the Superfund Amendments and Reauthorization Act (SARA) of 1986. These Acts established broad authority for the government to respond to uncontrolled releases of hazardous substances from inactive hazardous waste sites that endanger public health and the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at such sites; provided the authority for the government to undertake enforcement and abatement action against these parties; and established a trust fund to provide for cleanup when no responsible party could be identified. In addition, CERCLA provided for the revision and republishing of the National Contingency Plan (NCP, 40 CFR Part 300) that provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants.

The **Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)** is the official repository for all site- and non-site-specific Superfund data generated and compiled in support of CERCLA. CERCLIS, an administrative and management database, is used by the EPA to track activities conducted under its Superfund Program. The current version of the database, CERCLIS 3, is a client-server based system.

CERCLIS data are used to:

- help EPA Regional and Headquarters managers evaluate the status and progress of site cleanup actions;
- report official Superfund accomplishments to Congress and the public;
- track the Superfund Comprehensive Accomplishments Plan (SCAP); and
- track the Agency requirements from Government Performance and Results Act of 1993 (GPRA).

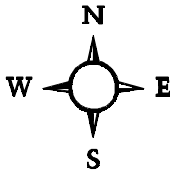
The Office of Emergency and Remedial Response maintains CERCLIS. CERCLIS also contains enforcement modules administered by the Office of Enforcement and Compliance Assurance and the Federal Facilities Restoration and Reuse Office.

2. SUMMARY ANSWERS TO REVIEW QUESTIONS



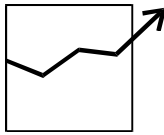
2.1. What does the database cover?

CERCLIS contains information on hazardous waste sites, site inspections, preliminary assessments, and remedial status from 1983 to the present. As of May 1999, the database contained records for 10,625 active sites. Specific information is maintained for each site. The database contains records for active Superfund sites, the number of which changes over time. Each site can contain multiple operable units, or distinct portions of the site where assessment, cleanup, enforcement, and planning and tracking activities occur. Descriptions for each site and operable unit within CERCLIS include: name, a brief description, and actions which include planned and actual start and completion dates, costs, principal contaminant(s), and remedies. CERCLIS also contains information on risk assessment, remedy selection, cleanup actions, community involvement, Federal facilities, project/program management, and removal action at a site.



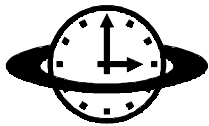
2.2. Can the database be used for spatial analysis?

Yes. Spatial variables in the database include Region code, State, city, ZIP code, street name, county, Congressional District, Metropolitan Area (MA), latitude and longitude, and US Geological Survey (USGS) State hydrological unit code (HUC).



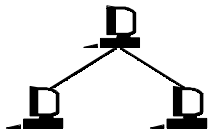
2.3. Can the database be used for temporal analysis?

Yes, CERCLIS data are used to report official Superfund accomplishments to Congress and the public, to help EPA Regional and Headquarters managers evaluate the status and progress of site cleanup actions, and to track the Superfund Comprehensive Accomplishments Plan (SCAP) and Agency's requirements under the Government Performance and Results Act (GPRA). As a management database, many entries include date fields, allowing for temporal analysis.



2.4. How consistent are the variables over space and time?

There is some consistency from site to site with regard to spatial and temporal characteristics. Data entered at the time of site discovery are preserved on Site Discovery screens to reflect the information originally entered for the site. Most other data can be updated over time as more is learned about the site. Changes over time in the reporting process are documented within the Superfund Program Implementation Manual.



2.5. Can data from CERCLIS be linked with information from other databases?

The ability to integrate this database with other databases is a determination that must be made on a case-by-case basis. CERCLIS contains Site IDs, which are key identifiers commonly used across databases to compare site information. The CERCLIS data can be linked (merged or queried) by spatial variables as well.



2.6. How accurate are the data in CERCLIS?

Quality Assurance (QA) of the data in CERCLIS is a Regional and Headquarters responsibility. In the Regions, the QA/QC process includes data audits for sites where cleanup is being conducted under Superfund authority. At Head-

quarters, data sponsors are responsible for the review of SCAP and GPRA data on a monthly basis, the review of much State assessment data, Record of Decision technical data, construction completion data, and cost and budget data.



2.7. What are the limitations of CERCLIS?

Some Superfund data are considered proprietary and enforcement sensitive, and are therefore not published. Any data that can be made available represents only a subset of the comprehensive data collected and maintained by EPA.



2.8. How can I get information on CERCLIS?

CERCLIS information is available through the Superfund Order and Information Line at (202) 260-8321 or (800) 775-5037. Data from CERCLIS can be accessed via the internet from the following web sites:

Envirofacts web site

(<http://www.epa.gov/enviro/html/cerclis/>)

Superfund web site

(<http://www.epa.gov/superfund/sites/index.htm>).

CERCLIS data are also available on diskette, magnetic tape, and CD-ROM through the National Technical Information Service. Information may also be obtained through the EPA Freedom of Information Act (FOIA) Office or through one of EPA's Regional FOIA offices.



2.9. Is there documentation on CERCLIS?

Although a one-stop user's guide is not available, contributors of National Priorities List (NPL) site data are given a series of short documents, called quick reference guides, which provide instructions so that they are able to submit data to EPA. Extensive help and a wide variety of informational documents are also available online through the Superfund website (<http://www.epa.gov/superfund/>). A data element dictionary is available, as well as several standard CERCLIS reports that contain information on current and previous (i.e. archived) hazardous waste sites. Together, the reference guides and online assistance provide all the information usually included in a user's manual. CERCLIS reports can also be downloaded from the Superfund website (<http://www.epa.gov/superfund/sites/topics/reports.htm>).

3. DETAILED ANSWERS TO REVIEW QUESTIONS



3.1. What does the database cover?

CERCLIS contains information on hazardous waste sites, site inspections, preliminary assessments, and remedial status from 1983 to the present. Specific information is tracked for each site over time. As of May 1999, the database contained records for 10,625 active sites. Within CERCLIS, the primary record (i.e. tracking unit) is a site. However, there are sections of the database with multiple records per site at the operable unit or activity level. There are 321 tables in CERCLIS, not including reference and cross-reference tables. These tables contain 5,679 columns (i.e., elements). Variables fall into distinct subject area module groups:

- The Site Information Module includes general site information.
- The Site Assessment Module supports managing and tracking data captured in the site assessment process.
- The Risk Assessment Module provides contaminant assessment data.
- The Remedy Selection Module relates to site specific remedial actions.
- The Community Involvement Module supports the tracking and managing of public outreach activities at a site.
- The Enforcement Module assists in the tracking and managing of a wide variety of information on the parties associated with a site, including tracking Enforcement Instruments.
- The Federal Facilities Module tracks information specific to Federally-owned sites.
- The Project Management Module supports the management of schedule and financial information, and tracks cleanup activities and responsible party compliance at a site.
- The Program Management Module supports management of the Superfund program.
- The Removal Module includes data on tracking and management of a site (from site discovery to removal action at a site).
- The Cost/Financial Module data tracks financial transactions and illustrates the spending chain from estimates to payments, supporting financial management for every Action.

Who Must Report?

Sites listed in the National Priorities List (NPL), investigated as a Superfund site, or currently being investigated as a Superfund site are all included in CERCLIS. The NPL is a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The NPL is primarily to serve as an information and management tool. The identification of a site for the NPL is intended primarily to guide EPA in:

- determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with a site;

- identifying what CERCLA-financed remedial actions may be appropriate;
- notifying the public of sites EPA believes warrant further investigation; and
- serving notice to potentially responsible parties that the EPA may initiate CERCLA-financed remedial action.

EPA learns of these sites through notification by the site owner, citizen complaints, State and local government identification, and investigations by EPA programs.

How Are Data Reported?

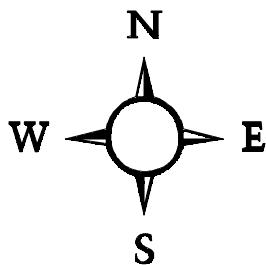
Information in CERCLIS is provided by the Regions. The data in CERCLIS are sent from each Region, from a LAN-based Superfund information system called WasteLan, to Headquarters. Updated information is available to Headquarters by the next day.

Data Elements

Some of the key categories of data elements are listed below and detailed descriptions are found in the data element dictionary at the Superfund website:

<http://www.epa.gov/superfund/sites/ded/index.htm>

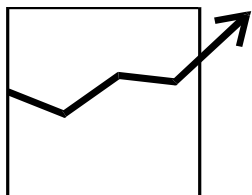
- Site description data include Federal Facility Code, Final NPL Update Number, Latitude, Longitude, Metro Statistical Area, NPL Status Code, Non-NPL Status Date, Non-NPL Status Code, Ownership Indicator, Proposed NPL Update Number, Region Code, Site City Name, Site Congressional District Number, Site County Code, Site County Name, Site Description, Site EPA ID Number, Site Federal Facility Hazardous Waste Docket Indicator, Site IFMS (Integrated Financial Management System) Site Spill ID, Site Incident Category Code, Site Incident Type Code, Site Name, Site NFRAP (No Further Remedial Action Planned) Indicator, Site RCRA ID, Site Zip Code, State Code, Street Address, and USGS Hydro Unit.
- Action description data include Action Actual Completion Date, Action Actual Start Date, Action Anomaly Code, Action Critical Indicator Code, Action Lead Type Code, Action Name, Action Short Name, Action Qualifier Code, Action Type Code, Operable Unit ID, and Planning Status Code.
- Alias information include Alias Site Description, Alias ID, Alias Latitude, Alias Longitude, Site Alias City, Site Alias Name, Site Alias State Code, Site Alias Street, and Site Alias Zip Code.
- Operable Unit data elements include Operable Unit ID and Operable Unit Name.
- Financial data elements include Financial Amount and Financial Date.



3.2. Can the database be used for spatial analysis?

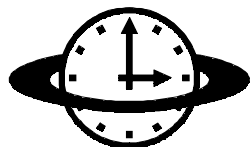
Yes. The spatial variables in the database are Region code, State, City name, ZIP code, street name, county name, Congressional District, metropolitan area, latitude/longitude, and USGS State Hydrological Unit Code (HUC). Maps that display the locations of NPL sites can be accessed via the internet at:

<http://www.epa.gov/superfund/sites/npl/npl.htm>



3.3. Can the database be used for temporal analysis?

Yes. CERCLIS data are used to help EPA Regional and Headquarters managers evaluate the status and progress of site cleanup actions, report official Superfund accomplishments to Congress and the public, track the Superfund Comprehensive Accomplishments Plan (SCAP), communicate planned activities and budgets, and track the Government Performance and Results Act of 1993 (GPRA). Life cycle documentation for CERCLIS provides information regarding the dates of initiation for the whole reporting activity (i.e., reporting on the status of hazardous waste sites), as well as for specific reported sites/operable units characteristics. The reporting dates for which a specific site or operable unit began can be obtained from the site discovery form for specific sites. Dates of discontinuation can be obtained from the Administrative Record.

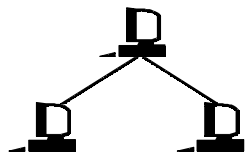


3.4. How consistent are the variables over space and time?

There is limited consistency from site to site with regard to spatial and temporal characteristics. Data entered at the time of site discovery are preserved on Site Discovery screens to reflect the information originally entered for the site. Most other data can be updated over time as more is learned about the site. One change that will occur soon involves modification of latitude/longitude coordinates from minutes, degrees, and seconds to minutes and a decimal.

As reporting needs have changed over time, so have the types of data collected. For example, CERCLIS has been modified to capture data needed to respond to requirements under the Government Performance and Results Act of 1993.

Changes over time in the reporting process are documented within the Superfund Program Implementation Manual (and its predecessor documents), which were developed to outline the overall conduct of this data collection and reporting effort.



3.5. Can data from CERCLIS be linked with information from other databases?

The ability to integrate this database with other databases is a determination that must be made on a case-by-case basis. This can be done by comparing the characteristics of this database with the corresponding characteristics of other databases of interest. For example, Site ID is a key identifier commonly used across databases to compare site information, and Site ID is tracked in

CERCLIS. Spatial variables may also be used for linking across databases and these include site name, city, county, State, ZIP code, Hydrological Unit Code, and latitude and longitude.



3.6. How accurate are the data in CERCLIS?

Quality Assurance (QA) of the data in CERCLIS is a Regional and Headquarters responsibility. In the Regions, the QA/QC process includes data audits for sites where cleanup is being conducted under Superfund authority. Such quality assurance procedures vary because of the differences in site characteristics that exist between Regions. In addition, Congressional inquiries and public scrutiny of particular sites may affect Regional oversight and audit efforts. At Headquarters, data sponsors also have a critical role for the QA of all data in their area of purview. For example, Headquarters is responsible for the review of SCAP and GPRA data on a monthly basis, the review of much State assessment data, Record of Decision technical data, construction completion data, and cost and budget data.



3.7. What are the limitations of CERCLIS?

The public access to CERCLIS components is limited due to the proprietary and enforcement sensitive nature of some data. While there are no explicit constraints on the use of these data, appropriate and professional judgement needs to be applied in their use and interpretation. CERCLIS information is sometimes used as a resource in assessing property value and the presence of a site in CERCLIS is subject to misinterpretation. CERCLIS sites are not necessarily contaminated, and sites not in CERCLIS are not necessarily contaminant-free.



3.8. How can I get information on CERCLIS?

CERCLIS, Archive No Further Remedial Action Planned (NFRAP), Records of Decision (RODS), and National Priorities List (NPL) information is available through the Superfund Order and Information Line at (202) 260-8321 or (800) 775-5037. Products can be ordered through an online order form at

<http://www.epa.gov/superfund/sites/phonefax/order.htm>.

CERCLIS information is also available on diskette, magnetic tape, and CD-ROM — for a fee — through the National Technical Information Service (NTIS). NFRAP related reports can also be obtained through the National Technical Information Service.

The National Technical Information Service
Phone: (703) 487-4650
Fax: (703) 321-8547

In addition, nonproprietary portions of this database can be accessed via the internet from two sources:

1. Envirofacts

http://www.epa.gov/enviro/html/cerclis/cerclis_query.html

Users can access CERCLIS data by using a Superfund Query Form. The CERCLIS component of Envirofacts is updated once a month using data extracted from the CERCLIS program system database.

2. EPA Site Information Page

<http://www.epa.gov/superfund/sites/>

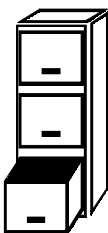
From this site, users can download information about the nation's hazardous waste sites. Options include database queries, text reports, and maps. Users can access CERCLIS data by using either Basic or Advanced Site Query Information Forms. Through this site, EPA also provides online access to data on sites removed from CERCLIS through Site Archive NFRAP reports. Regional information may be available on Regional home pages and State information at State home pages.

Information and documentation on CERCLIS that is not available through these sources can be obtained by contacting the EPA Freedom of Information Act (FOIA) Office at (202) 260-4048, or sending requests to the attention of:

Jeralene B. Green
Agency FOIA Officer
US Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Questions may also be directed to the Regional offices. For complete information on EPA FOIA office addresses and phone numbers, please see:

<http://www.epa.gov/foia/broc.htm>



3.9. Is there documentation on CERCLIS?

Statutory Authority

The statutory authority for CERCLIS is found in US Code Title 42, The Public Health and Welfare, Chapter 103 Comprehensive Environmental Response, Compensation, Subchapter III - Miscellaneous Provisions

Key Information

While a comprehensive user's guide does not exist, there is a brief user's guide to the Superfund Query Form located at:

http://www.epa.gov/enviro/html/cerclis/cer_userguide.html

A small Superfund Data Element Dictionary is available online. The web address is <http://www.epa.gov/superfund/sites/ded/index.htm>. In addition, contributors of data on NPL sites have access to CERCLIS documentation including quick reference sheets, detailed data element dictionaries, and system requirements specification manuals. These reference materials are not available on the internet, but are available through Freedom of Information Act (FOIA) requests. Requestors may send FOIA requests to the attention of:

Jeralene B. Green
Agency FOIA Officer
US Environmental Protection Agency
401 M Street, SW
Washington, DC 20460

Several standard reports that contain information on current and previous (i.e., archived) hazardous waste sites can be downloaded via the following Web site: <http://www.epa.gov/superfund/sites/topics/ftp.htm>. The following table lists the reports available at this address.

CERCLIS DOCUMENTS

All of the reports listed below are available in ASCII format. They can be viewed using the CERCLIS Reports Browser available at the Superfund web site.

Document Title	Description
Inventory of CERCLIS and Archived Sites by State	<p>This report displays the number of sites by State/Possession that are currently in CERCLIS; it also displays the number of sites by State/Possession that have been archived or require no further remedial action.</p> <p>*This report is based upon a monthly CERCLIS frozen database.</p>
List 8T—Archive (NFRAP) Site Listing	<p>This report lists all sites that were previously listed as contaminated or were suspected of being contaminated, but have subsequently been cleared of contamination or are no longer suspected of contamination. The report lists the sites/incidents, addresses, and Congressional districts, and the remedial, removal, and community relations events associated with each site/incident. This report was previously called the “Transition Site/Event Listing.”</p>
List 9—Site Comprehensive Listing	<p>This report lists all Superfund sites/incidents, addresses, and Congressional districts, and the remedial, removal, and community relations events associated with each site/incident.</p>
SCAP 11—Site Summary Report for NPL Sites	<p>This report provides detailed information on Superfund sites/incidents on the National Priorities List (NPL). Only the sites/incidents that have planned or actual remedial/removal activities are selected for inclusion in the report. The remedial/removal activities (planned or actual) as well as the enforcement activities (actual) related to each site/incident are listed.</p>
SCAP 12—Site Summary Report for Non-NPL Sites	<p>This report provides detailed information on Superfund sites/incidents that are not on the National Priorities List (NPL). Only the sites/incidents that have planned or actual remedial/removal activities are selected for inclusion on the report. The remedial/removal activities (planned or actual) as well as the enforcement activities (actual) related to each site/incident are listed.</p>

CERCLIS— dBASEIII+ Format (.dbf)	This file (cercdbf.zip) contains five dBASEIII+ (.dbf) files when decompressed. Combined, these files provide detailed information used in Superfund’s “Current” Hazardous Waste Sites selections on the Superfund Home Page. You will need a dBASEIII+ Browser or program to read the dBASEIII+ formatted files. You may also want to download the CERCLIS (.dbf) and (.txt) Record Layout file to identify the named fields used.
CERCLIS—ASCII Text Format (.txt)	This file (cerctxt.zip) contains five ASCII (.txt) formatted files when decompressed. Combined, these files provide detailed information used in Superfund’s “Current” and “Previous” Hazardous Waste Sites selections on the Superfund Home Page. You will need a text editor program to read the files. Because these files are large, your text editor may not be able to read an entire file at one time. You may also want to download the CERCLIS (.dbf) and (.txt) Record Layout file to identify the field positions.
Archive (NFRAP)— dBASEIII+ Format (.dbf)	This file (cercadbf.zip) contains five dBASEIII+ (.dbf) files when decompressed. Combined, these files provide detailed information used in Superfund’s “Current” and “Previous” Hazardous Waste Sites selections on the Superfund Home Page. You will need dBASEIII+ Browser or program to read the dBASEIII+ formatted files. You may also want to download the CERCLIS (.dbf) and (.txt) Record Layout file to identify the named fields used.
Archive (NFRAP)— ASCII Text Format (.txt)	This file (cercatxt.zip) contains five ASCII (.txt) formatted files when decompressed. Combined, these files provide detailed information used in Superfund’s “Current” and “Previous” Hazardous Waste Sites selections on the Superfund Home Page. You will need a text editor program to read the files. Because these files are large, your text editor may not be able to read an entire file at one time. You may also want to download the CERCLIS (.dbf) and (.txt) Record Layout file to identify the field positions.
CERCLIS and Archive (NFRAP)—(.dbf) and (.txt) Record Layout	This file (cercfrmt.txt) provides the CERCLIS and Archive dBASEIII+ (.dbf) and CERCLIS and Archive ASCII Text (.txt) record layout for the downloadable files.

These CERCLIS reports and data are updated on a monthly basis, except the SCAP 11 and SCAP 12 data, which are updated quarterly.